X-ray Structure Determination

A PRACTICAL GUIDE

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EXHIBIT A

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In Memoriam
A. L. PATTERSON

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[Ch. 3

Symmetry Operations and Space Groups

System	Point groups			Space groups	groups			Fraction
Tricilate		P						1/2
Monocitaic	2 m 2/m	P2 Pm P2(m	P2, Pe P2,fm	ದ್ದಿ ಬ್ರೌ	2jc	P2./c	CZło	1/4
	222	722 722	722,	P2,2,2 12,2,2,	P2,2,2,	CITT ¹	CIII	
	mm2	Press	Pmc2, Pba2 Arm2	Pcc2 Pra2, Abra2	Pms2 Pms Ams2 Ims2	Pca21 Cmm2 Aba2	Prc2 Cmc2, Fram2	8/1
	MIRAN .	Prince Prince Prince Prince Commit	Pran Peca Pbca Ccem	Pecm Pham Phea Crima	Pban Pcen Pruna Ccea	Pmma Pbcm Cmcm Fmmm	Print Pròm Cracs Fidd	
	4 th 4 find 4 fi	P4 P4 P4/m	P4. f3 P4:/m	P4 P4/n	P43 P43/11	14 14/m	[4] [4,]a	8/1
Tetragonal	422 4mm	P422 P4,22 P4mm P4,mc	P42,2 P4,21,2 P46m P4,5c	P4,22 1422 P4 ₂ cm 14mm	P4,2,2 I4,22 P4,vm I4cm	P422 P4cc 14,md	P4,2,2 P4nc I4,cd	·

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•	42m	P42m P4b2	P32c P3n2	P42,m Idm2	P\$21c	P4m2 137m	P4c2		
Tetragonal .	4/mmm	P4/mmm P4/mmm P4./mbc	P4/mcc P4/nco P4-lmm	P4/nbm P4 ₁ /mmc P4 ₂ /nmc	P4/mon P4z/mcm	P4/mbm P4z/mbc I4/mmm	P4fmrc P42fmm Idfmcm	1/16	§3.4]
		I4 ₁ famd	14, facd						
- :::	en en	EE	Ps.	P3 ₁	R3			1/6	
Trigonal/ Rhombonedral,	32	P312	P32il	P3,12	P3,21	P3,12	P3 ₂ 21		
- - .	3m 3m	P3m1	P31m PJ10	P3¢1 P3m1	P31c P3cl	R3m R3m	R3c RJc	1/12	
ه ي	<i>w]</i> 9	P6 P8 F6/m	P6.1m	P63	P6,	₽6.	. P63.	1/12	
Нехадопа	622 6mm 6m2	P622 PSmm PSm2	P6,22 P6cc P6c2	P6,22 P6,cm P82m	P6,22 P6,mc P62c	P6,22	P6,22	174	
	<i>6∤mm</i> m	P6/mmm	P6/mcc	P6 ₃ /mcm	P6s/mmc				
	23 m3	P23 Pm3 Pm3 Ia3	P23 Pn3	123 Fm3	P2 ₁ 3 Fd3	12,3 Im3	Pa3	1/24	Spac
Oubic	432	P432	P4,32	F432	F4 ₁ 32	1432	P4 ₃ 32		e Gra
	43 <i>m</i> m3m	P43m Pm3m	F43m Pn3n	I43m Pm3n	P43n Pn3m	F43c Fm3m	143d Fm3c	1/48	ក្សាន
		FdIm	Fd3c	Im3m	Ia3d				55

* The eleven Laue symmetries are separated by horizontal lines.

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